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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,596	07/24/2003	William Patrick Tunney	11884/404601	7936

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WASHINGTON, DC 20005

EXAMINER

PATEL, SHEFALI D

ART UNIT PAPER NUMBER

2621

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/625,596

Applicant(s)

TUNNEY, WILLIAM PATRICK

Examiner

Shefali D Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 7/24/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14-19 is/are rejected.
- 7) ☒ Claim(s) 12 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/24/03; 11/13/03</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-6, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gannaway et al. (hereinafter, "Gannaway") (US 4,773,860) in view of Lousig-Nont (US 4,358,279).

With regard to **claim 1** Gannaway discloses detecting shapes of the writings (col. 5 lines 38-42); comparing the detected shapes with a plurality of shapes stored in memory in associated with a logical set (col. 5 lines 47-52); upon matching, designating to which of the multiple copies the matched detected shapes belong (col. 6 lines 46-50); retrieving from memory data associated with the matched stored shapes (col. 6 lines 62-68); and storing the retrieved data according to its designated copy as writing made on that designated copy (storing in the memory means disclosed at col. 5 lines 51-52). Gannaway discloses receiving data from an opaque, semi-flexible sheet made from an extrudable molded plastic as disclosed at col. 5 lines 34-36. However, Gannaway does not expressly disclose receiving capture data from a capture device, the capture data representing writings made on multiple copies of a paper form. Lousig-Nont discloses this at col. 2 lines 16-29. Gannaway and Lousig-Nont are combinable because they are from the same field of endeavor, i.e., testing devices. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Lousig-Nont with Gannaway. The motivation for having multiple questionnaire forms (Lousig-Nont) rather than a single overlay form (Gannaway) is to provide, a tally sheet having a procedure for grading the symbols marked on the score sheet by assigning a predetermined numerical value as suggested by Lousig-Nont at col. 1

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lines 51-60. Therefore, it would have been obvious to combine Lousig-Nont with Gannaway to obtain the invention as specified in claim 1.

**Claim 17** recites identical features as claim 1 except claim 17 is a system claim. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 17. Please note the system in Gannaway in Figure 1A.

With regard to claim 4 Gannaway discloses the capture data is captures simultaneously with the writings made on the (multiple) copies of the paper form (the electric contacts detect the answers (writings) as it is being written at col. 6 lines 46-68).

With regard to claim 5 Gannaway discloses the stored shapes corresponding to answers to a question on the (paper) form (col. 5 lines 30-42).

With regard to claim 6 Gannaway discloses the retrieved data that includes answers to a questionnaire (col. 5 lines 38-42).

3. Claims 2-3, 7-11, 14-16, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gannaway in view of Lousig-Nont as applied to claims 1, 4-6, and 17 above, and further in view of Yoshino (US 6,618,504).

With regard to **claim 7**, Gannaway (as modified by Lousig-Nont) discloses all of the claimed subject matter as already discussed above in claim 1 and the arguments are not repeated herein, but are incorporated by reference. Claim 7 distinguishes from claim 1 only in that it recites receiving coordinates from a capture device, the set of coordinates representing shapes. However, Yoshino discloses this at col. 17 lines 13-18, col. 21 lines 37-61 and col. 22 lines 3-20. Gannaway, Lousig-Nont and Yoshino are combinable because they are from the same field of endeavor, i.e., testing devices. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Yoshino with Lousig-Nont and Gannaway. The motivation for doing is to indicate the relative positions of the handwriting to determine the shape of the writing as suggested by Yoshino at col. 6 lines 53-67.

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Therefore, it would have been obvious to combine Yoshino with Lousig-Nont and Gannaway to obtain the invention as specified in claim 7.

With regard to claim 2 Yoshino discloses a set of time ordered coordinates (x,y) of the writings on the copies (col. 17 lines 13-14, 27-28).

With regard to claim 3 Yoshino discloses a set of vector coordinates (x,y,t) of the writings on the copies (col. 25 lines 28-34).

With regard to claim 8 Yoshino discloses detecting the shapes from the set of coordinates (detecting handwriting from the coordinates col. 17 lines 13-18, col. 21 lines 37-61 and col. 22 lines 3-20),

With regard to claim 9 Yoshino discloses coordinates indicating when (x,y,t) and where (x,y) the set of marks was made (col. 25 lines 28-34; col. 25 lines 28-34).

With regard to claim 10 Gannaway as modified by Lousig-Nont discloses the paper data form is attached to the capture device, the data form including the multiple pages and a plurality of boxes, each box having a unique shape and corresponding to a questionnaire answer as already discussed above in claim 1 and the arguments are not repeated herein, but are incorporated by reference. Please note that multiple pages with multiple boxes of the questionnaire is disclosed in Lousig-Nont as seen in Figures 1-3.

With regard to claim 11 Gannaway discloses filing in the boxes as seen in Figure 1 with a probe 60.

With regard to claim 14 Gannaway discloses each of the shapes made by tracing the perimeter of one of the boxes (perimeter of the boxes is being traces to determine whether it's a triangle shape or not at col. 5 lines 38-47).

With regard to claim 15 Gannaway as modified by Lousig-Nont discloses retrieving from memory predefined shapes expected to be on the capture device; comparing the indicated shapes to the

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predefined shapes; determining which of the predefined shapes match the indicated shapes; determining on which page each of the indicated shapes belongs based on the match; and storing the questionnaire answers corresponding to the determined predefined shapes on the determined pages as already discussed above in claim 1 and the arguments are not repeated herein, but are incorporated by reference. Please note that designating in claim 1 is same as determining on which page in claim 15.

With regard to claim 16 Lousig-Nont discloses receiving an identification of the paper data form by identifying the pages 102 and 104, col. 2 lines 16-26.

Claim 18 recites identical features as claim 9. Thus, arguments similar to that presented above for claim 9 is equally applicable to claim 18.

With regard to claim 19 Gannaway discloses set of marks indicating a plurality of shapes, col. 5 lines 30-47.

*Allowable Subject Matter*

4. Claims 12-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The closest prior art to Gannaway, Lousig-Nont and Yoshino are directed to a testing device/method as disclosed in independent claims 1, 7, and 17.

However, the closest prior art fails to disclose anything about identifying the multiple pages, including receiving multiple sets of coordinates corresponding to the same data, determining the order in which the multiple sets of coordinates was captured by the capture device, and assigning each set to a different one of the multiple pages in the determined order as disclosed in claim 12. Further, the closest prior art fails to disclose discarding a mistakenly filled-in box, including receiving the set of coordinates corresponding to the mistakenly filled-in box and the set of coordinates corresponding to a cross-out line, determining that the cross-out line was drawn across the mistakenly filled-in box on the paper form, and

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eliminating the set of coordinates corresponding to the mistaken filled-in box and the set of coordinates corresponding to the cross-out line as disclosed in claim 13. It is for these reasons in combination with all the other elements of the claim that claims 12-13 would be allowable if rewritten in independent form including all of the limitation of the base claim and any intervening claims.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.  
US Re. 36,656 – automatic acquisition and recognition of complex visual shapes within images.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shefali D Patel whose telephone number is 703-306-4182. The examiner can normally be reached on M-F 8:00am - 5:00pm (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 9, 2005

Shefali D Patel  
Examiner  
Art Unit 2621



LEO BOUDREAU  
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